

CONSUMER PRODUCTS SERVICES DIVISION

WHITNEY BROTHERS CO.

Technical Report: (5111)089-0054 April 08, 2011

Date Received: March 30, 2011 Page 1 of 40

WAYNE COTTON
WHITNEY BROTHERS CO.
93 RAILROAD STREET
PO BOX 644
KEENE, NH 03431
UNITED STATES

Sample Description: NON-FULL SIZE CRIB

Vendor:WHITNEY BROTHERS CO.Sample Size:1Manufacturer:WHITNEY BROTHERS COStyle No(s):N/ABuyer:N/ASKN/SKU No.:WB9504

Labeled Age Grade: NOT PRESENT PO No.: WH1272011-A Appropriate Age Grade: CHILDREN PRODUCTS, FROM 0 Ref #: N/A

TO 3 YEARS OF AGE

Client Specified Age Grade: NOT SPECIFIED Country of Origin: UNITED STATES

Tested Age Grade: CHILDREN PRODUCTS, FROM 0 Assortment No.: N/A

TO 3 YEARS OF AGE

UPC Code: N/A

EXECUTIVE SUMMARY:

The sample(s) MEETS the following requirement(s):

- The requirements of 16 CFR Part 1220, "Safety Standard for Non-Full-Size Baby Cribs".
- The requirements of ASTM F406-10b, "Standard Consumer Safety Specification for Non-Full-Size Baby Cribs / Play Yards".

Note: Data has been transferred from Bureau Veritas Consumer Products Services, Inc. Technical Reports 5111-032-

BVCPS Buffalo Contact Information for this Report:

Administrative Questions: Stephen Galbo Phone: 716-505-3571 <u>stephen.galbo@us.bureauveritas.com</u>

Technical Questions: Jennifer Wieser Phone: 716-505-3365 jen.wieser@us.bureauveritas.com

Bureau Veritas

Consumer Products Services, Inc.

Jennifer Wieser Product Test Engineer,

Toy and Juvenile Products Department

/bl



Technical Report: **(5111)089-0054**April 08, 2011
Page 2 of 40

Section in F406-10a	Requirement	Result
5	General Requirements	
5.1	All product corner post extensions	-
5.1.1	- shall not extend more than 0.06 in. (1.5 mm) above the upper edge of an end or side panel, whichever is higher, when measured from the lowest point on the upper edge of the end or side panel within 3 in. (76 mm) from the outermost contour of the post or elbow.	М
5.1.1.1	This requirement applies when any drop side/drop gate is in either the raised or lowered position.	NA
5.1.2	- The limitation in ASTM F406-10a section 5.1.1 do not apply to a corner post assembly that extends at least 16 in.(400mm) above the uppermost surface of the side rail in its highest position.	-
5.1.3	 Corner posts intended to accept removable vertical extensions made up of two or more segments (such as canopy post extensions) shall not permit the attachment of individual segments such that the resultant vertical extension would be in violation of the dimensional requirements of ASTM F406-10a section 5.1. 	NA
5.1.4	- The dimensional requirement in ASTM F406-10a section 5.1 shall also apply to vertical members of circular cribs.	NA
5.2 (#)	Before testing	-
	- Shall not have Sharp Point defined in 16 CFR 1500.48	M
	- Shall not have Sharp Edge defined in 16 CFR 1500.49	M
	After testing	-
	- Shall not have Sharp Point defined in 16 CFR 1500.48	M
	- Shall not have Sharp Edge defined in 16 CFR 1500.49	M
5.3 (#)	Before testing	-
	- Shall not have Small Part defined in 16 CFR 1501	M
	After testing	-
	- Shall not have Small Part defined in 16 CFR 1501	M
5.4	The paint and surface coating on the product shall comply to 16 CFR	NT
	1303.	Per Client Request
5.5	There shall be no flammable solid as defined in 16CFR 1500.3 (c)(6)(vi) before or after testing in according with this specification.	М
5.6	Scissoring, Shearing, or Pinching	-



Technical Report: **(5111)089-0054**April 08, 2011
Page 3 of 40

Section in F406-10a	Requirement	Result
5.6.1	Any accessible point at the edges of the rigid parts throughout the range of motion	-
	- shall either be less than 0.210 in. (5.30 mm) or greater than 0.375 in. (9.50 mm) in diameter.	NA
5.7	Toy accessories attached to, removed from, or sold with a product, as well as their means of attachment, must meet applicable requirements of Specification F963.	NA
5.8	Latching and Locking Mechanisms	
5.8.1	All latches that are intended to be latched and unlatched during normal use while the child is in the product shall engage automatically when placed in the use position before and after testing	NA
	- Latches may be manually activated to allow placement into the use position but must engage automatically when released.	NA
5.8.2	Any unit that folds	-
	- shall have a latching or locking device or other provision in the design that will prevent the unit from unintentionally folding when properly placed in manufacturer' recommended position.	NA
5.8.2.1	During and upon completion of all testing, the unit shall remain in its manufacturer's recommended use position.	NA
5.8.3	Unit is designed with a latching or locking device	-
5.8.3.1	the latching or locking device shall remain engaged and operative after testing.	NA
5.8.3.2 (#)	 each single-action locking or latching device that is provided to prevent folding shall require a minimum force of 10 lbf (45 N) to activate the release mechanism. (Test method-ASTM F406-10a section 8.8.2) 	NA
5.8.3.3	each double-action locking or latching device shall require two distinct and separate actions for release.	NA
5.8.3.4	Product designs requiring latching or locking of a top rail(s) to prevent folding that includes central hinge(s) and rail assembly(ies) that moves downward when folded	-
	- shall be automatically engages when placed in a manufacturer's recommended use position.	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 4 of 40

Section in F406-10a	Requirement	Result
5.8.3.5	The top rail shall not give the appearance of being in the manufacturer's recommended use position before the locking device is fully engaged.	NA
	 If the product has a latching device that automatically engages and is intended to be set up by first erecting the side rails, and then depressing a center floor hub, the product shall be evaluated for false latch by testing in accordance with ASTM F406-10a section 8.27. 	
5.9	Opening	
5.9.1	Holes or slots that extend entirely through a wall section of any rigid material less than 0.375-in. (9.53mm) thick and admit a 0.210-in (5.33mm) diameter rod	-
	- shall also admit a 0.375-in. (9.53mm) diameter rod.	NA
	 Holes or slots that are between 0.21 in. (5.33mm) and 0.375 in. (9.53mm) and have a wall thickness less than 0.375-in. (9.53mm) 	-
	 shall be permissible, provided the depth are limited to 0.375-in.(9.53mm) maximum by another rigid surface. 	NA
	The product shall be evaluated in all manufacturer's recommended use position.	-
	Holes and openings in surfaces that are in contact with the floor or are below the mattress support and more than 3 in. (76mm) in from the perimeter of the frame or outer perimeter of the occupant space of a play yard or non full-size crib are exempt from this requirement because they are deemed not accessible to the occupant or child on the outsides of the product.	
5.9.2	Openings in the surface of the rigid mattress support material shall be designed to prevent entrapment of fingers, toes, hands and feet.	-
	Round openings	
	- shall comply with ASTM F406-10a section 5.9.1, and	NA
	- shall not exceed 1.25 in. (32 mm) diameter.	NA
	Other shaped openings	-
	- shall comply with ASTM F406-10a section 5.9.1, and	NA
	 continuous portion of an opening that admits a 0.375 in. (9.50 mm) diameter rod must fit within a 1.25 in. (32 m) diameter circle. 	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 5 of 40

Section in F406-10a	Requirement	Result
5.10(#)	Protective Components (Test method- ASTM F406-10a section 8.21)	
	Protective components that can be grasped by a child, or there is at least a 0.040 in (1.00 mm) gap between the component and its adjacent parent component shall not be removed during testing.	NA
5.11	Labeling	
5.11.1	Warning labels (whether paper or nonpaper) shall be permanent when test per ASTM F406-10a section 8.18 removed, must be permanent.	М
5.11.2	Warning statement applied directly onto the surface of the product by hot stamping, heat transfer, printing, wood burning, etc. shall be permanent when tested per ASTM F406-10a section 8.19.	NA
5.11.3	Nonpaper labels shall not liberate small parts when tested in accordance with ASTM F406-10a section 8.20.	NA
5.11.4	Storage pouch or other part with warning statement printed on it, excluding labels, shall be considered permanent if it cannot be removed when tested in accordance with ASTM F406-10a section 8.23.	NA
5.12(#)	Stability (Test Method – ASTM F406-10a section 8.17)	
	A minimum of three perimeter support points of the product not in a straight line shall remain in contact with the inclined plane.	М
	 Product with an adjustable mattress support shall be tested with the mattress in the lowest adjustment position and shall meet the above requirement. 	М
5.13	Cord / Strap Length (Test method – ASTM F406-10a section 8.24)	
	 Cord or strap made of flexible material attached to the product shall not have a free, stretched length in excess of 7.4 in. (188 mm). 	NA
5.14	Coil Springs	
	Exposed coil spring, which is accessible to the occupant, having a space between coils of 0.210 in.(5.50 mm) or greater during static load test specified in ASTM F406-10a section 8.6, and 8.13 shall be covered or otherwise designed to prevent injury from entrapment.	NA
5.15	Entrapment in Accessories	
5.15.1	When tested in accordance with the procedure in ASTM F406-10a section 8.26.2 openings shall not permit the passage of the entire small head probe unless they allow the free passage of the entire large head probe.	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 6 of 40

Section in F406-10a	Requirement	Result
5.15.2	When tested in accordance with the procedure in ASTM F406-10a section 8.26.3, all attachment points shall remain attached and any opening exposed by the test shall not permit the entire passage of the small head probe.	NA
5.15.4	With the accessory installed on the play yard / non-full size crib per the instructions, cords and straps on the accessory, whether fastened or unfastened, must not capable of forming a loop in conjunction with the product that allows complete passage of the small head probe. Restraints straps shall be evaluated in all possible configurations, other than the manufacturer's intended use position fastened on top of the product surface.	NA
	In addition, restraint straps are to be evaluated as follows:	
5.15.4.1	Evaluation on Underside of Accessory—If any restraint component can be pushed or pulled with a force less than 25 lb through any opening that extends completely through the accessory, the restraint component shall be pushed or pulled through the accessory and evaluated in the fastened and unfastened condition below the lowest surface on the underside of the accessory. Any loop(s) formed shall not allow complete passage of the small head probe.	
5.15.4.2	When fastened per the manufacturer's instructions, extended to their greatest length and draped over the side of the accessory, restraint straps shall not allow complete passage of the small head probe below the lowest surface on the underside of the accessory.	
5.16	Mattress	
5.16.1	Each product shall be sold with the mattress pad included.	NA
5.17	Mattresses for Rigid Sided Products	
5.17.1	Mattress Thickness	M
5.17.1.1	A mattress supplied with a non-full-size crib shall, in a noncompressed state, have a thickness that will provide a minimum effective crib-side height dimension of at least 20 in. (50.8 cm) as measured from the upper surface of the crib side or end panel, or both. For this measurement, the crib side shall be in its highest adjustable position and the mattress support in its lowest adjustable position.	М
5.17.1.2	A mattress supplied with a non-full-size crib shall, in a noncompressed state, have a thickness that will provide a minimum effective crib-side height dimension of at least 3 in. (7.6 cm) as measured from the upper surface of the mattress to the upper surface of the crib side or end panel, or both. For this measurement, the crib side shall be in its lowest adjustable position and the mattress support in its highest adjustable position.	М



Technical Report: **(5111)089-0054**April 08, 2011
Page 7 of 40

Section in F406-10a	Requirement	Result
5.17.2	Mattress Dimensions—The dimensions of a mattress supplied with a non-full-size baby crib shall be such that the mattress, when inserted in the center of the crib, in a noncompressed state at any of the adjustable positions of the mattress support, shall not leave a gap of more than 1/2 in. (1.3 cm) at any point between the perimeter of the mattress and the perimeter of the crib. When the mattress is placed against the perimeter of the crib the resulting gap shall not exceed 1 in. (2.6 cm).	M
5.18	Protrusions (Test method – ASTM F406-10a section 8.25)	
	No string on the weight gage shall state attached to a protrusion.	NA
5.19	Crib designs shall allow assembly of key structural elements only in the manufacturer's recommended use position or have permanent markings that indicate their correct orientation. The markings must be conspicuous in any misassembled state.	М
6	Performance Requirements for Rigid-Sided Units	
6.1	Before and after all testing, the product shall comply with the requirements of ASTM F406-10a section 5.	M
6.2	Crib-Side Height	
6.2.1	For moveable sides, with the mattress support in its highest adjustable position and the crib side in its lowest adjustable position, the vertical distance from the upper surface of the mattress support to the upper surface of the crib side or end panel, or both, shall not be less than 5 in. (12.7 cm).	NA
6.2.2	For stationary sides, with the mattress support in its highest adjustable position, the vertical distance from the upper surface of the uncompressed mattress to the upper surface of the crib side or end panel, or both, shall not be less than 9 in. (22.8 cm).	М
6.2.3	With the mattress support in its lowest adjustable position and the crib side in its highest adjustable position, the vertical distance from the upper surface of the mattress support to the upper surface of the crib side or end panel, or both, shall not be less than 22 in. (55.8 cm).	М
6.2.4	Crib Side Configurations—Cribs with side(s) having moveable components intended to aid in access to the occupant shall have those sides rigidly attached to the crib ends and contain no movable section less than 14 in. (35.6 cm) from the top of the noncompressed mattress with the mattress support in its lowest adjustable position.	NA
6.3	Spacing of Unit Components	



Technical Report: **(5111)089-0054**April 08, 2011
Page 8 of 40

Section in F406-10a	Requirement	Result
6.3.1	Uniformly Spaced Components—The distance between	М
	adjacent, uniformly spaced components (such as slats,	
	spindles, or corner posts, or a combination thereof) shall not be greater than 2 3/8 in. (6 cm). The distance between any such adjacent components shall not exceed 2 1/2 in. (6.3 cm) at any point when subjected to the test procedure specified in ASTM F406-10a section 8.2.	
6.3.2	Nonuniformly Spaced Components:	NA
6.3.2.1	The distance between adjacent nonuniformly spaced	NA
	components (such as slats, spindles, or corner posts, or a combination thereof) shall preclude passage of block A, specified in ASTM F406-10a section 8.1, when inserted in any orientation (nonuniformly spaced components referes to irregularly shaped crib slats whether parallel to each other or not).	
6.3.2.2	The spacing between any such adjacent components	NA
	shall preclude passage of block B, specified in ASTM F406-10a section 8.1, when inserted in any orientation immediately above and below the loading wedge specified in ASTM F406-10a section 8.1 while the components are being subjected to the test procedure specified in ASTM F406-10a section 8.2.	
6.4	Hardware	
6.4.1	The hardware in a non-full-size baby crib shall be designed and constructed to eliminate pinching, bruising,	М
	lacerating, crushing, amputating, or other potentials for injury, or a combination thereof, when the crib is in normal use or when subjected to reasonably foreseeable damage or abuse.	
6.4.2	Non-full-size baby cribs shall incorporate locking or latching devices for dropgates or other moveable sides. These devices shall require either a minimum force of 10 lb (4.5 kg) for activation or at least two distinct actions to release them.	NA
6.4.3	Woodscrews shall not be used in the assembly of any components that must be removed by the consumer in the normal disassembly of a non-full-size baby crib/play yard.	NA
6.5	Fasteners	
6.5.1	Wood Screws:	
6.5.1.1	Wood screws shall not be used in the assembly of key structural elements that must be removed by the consumer in the normal disassembly of a crib.	М



Technical Report: **(5111)089-0054**April 08, 2011
Page 9 of 40

Section in F406-10a	Requirement	Result
6.5.1.2	No crib shall require consumer assembly of key structural elements using wood screw fasteners. This shall not apply to drawers or other storage components or accessory items.	М
6.5.2	Factory assembly using wood screws on key structural elements is allowed if the wood screws are a second method of attachment or the wood screws include a lock washer, glue, or other means to impede loosening or detachment.	NA
6.5.3	Metal inserts with external wood screw threads for screwing into a wood component and providing internal machine threads to accommodate a machine screw shall be glued or include other means to impede loosening or detaching.	М
6.5.4	Wood screws are permitted be used as the primary fasteners or only fasteners for non-key structural elements.	NA
6.5.5	Metal to metal threaded fasteners, such as sheet metal screws and machine screws, secured into metal components and used to attach key structural elements shall have lock washers, self-locking nuts or other means to impede loosening as defined in ASTM F406-10a section 6.16.2 or detachment during the testing required by this standard.	М
6.6	Construction and Finishing:	
6.6.1	All wood surfaces of non-full-size baby cribs shall be smooth and free from splinters.	М
6.6.2	All wood parts of non-full-size baby cribs shall be free from splits, cracks, or other defects that might lead to structural failure.	М
6.6.3	Ends and sides of non-full-size baby cribs shall have no horizontal bar, ledge, projections, or other surface accessible to the child inside the crib that could be used as a toehold (any ledge or projection with a depth dimension greater than 3/8 in. (1 cm) located less than 16 in. (40.6 cm) above the mattress support in its lowest adjustable position when the crib side is in its highest adjustable position.	М
6.7	Requirements for Cutouts—Non-full-size baby cribs shall comply with the test requirements of ASTM F406-10a section 8.3.	NA
6.11	Plastic Teething Rail:	
6.11.1	This test consists of deforming the plastic teething rail under load to determine the security of the attachment.	NA
6.11.2	Failure occurs when the feeler gage as defined in	NA
	ASTM F406-10a section 8.4.1.1 can freely enter into a gap created by the deflection or deformation of the plastic teething rail, or both, when tested in accordance with ASTM F406-10a section 8.4.	



Technical Report: **(5111)089-0054**April 08, 2011
Page 10 of 40

Section in F406-10a	Requirement	Result
6.12	Cyclic Testing—No crib shall exhibit structural failure, loosening of fasteners as defined in ASTM F406-10a section 6.12.1, damage to latching or locking mechanisms, or failure of latching or locking mechanisms when tested in accordance with the test methods in ASTM F406-10a section 8.5.	М
6.12.1	After testing in accordance with the procedure in ASTM F406-10a section 8.5, key structural elements attached by screws or threaded fasteners shall not have separated by more than 0.04 in. (1.00 mm) upon completion of testing.	М
6.13	Side(s) or End(s) Latch Testing, or Both	
6.13.1	Dropgate or Other Moveable Side Latch Testing:	
6.13.1.1	This test consists of loading the end while a prescribed force is applied to the dropgate or other moveable side(s) (see ASTM F406-10a section 8.6.3 or 8.6.4, whichever is appropriate).	NA
6.13.1.2	The latching mechanism shall not disengage during testing and shall continue to function in the intended manner upon completion of the testing.	NA
6.13.2	Foldable Side or End Latch Testing:	
6.13.2.1	This test consists of loading the latches intended to prevent folding of the side when in the manufacturer's recommended use position (see ASTM F406-10a section 8.6.5).	NA
6.13.2.2	The latching mechanism shall not disengage during testing and shall continue to function in the intended manner upon completion of the testing.	NA
6.14	Mattress Support System Vertical Impact Test	
	Requirements	
	After testing in accordance with the procedure in ASTM F406-10a section ASTM F406-10a section 8.7, the non-full size crib shall comply with the requirements of Section ASTM F406-10a section 5.	M
	Key structural elements attached by screws shall not have separated by more than 0.04 in. (1.00 mm) upon completion of testing.	
6.15	Mattress Support System Testing	
6.15.1	A mattress support that is fixed with respect to the unit frame, is tested in accordance with ASTM F406-10a section 8.8. Test failure occurs if the mattress support system becomes detached from the frame at any point of attachment, or if the force cannot be maintained.	М



Technical Report: **(5111)089-0054**April 08, 2011
Page 11 of 40

Section in F406-10a	Requirement	Result
6.15.2	A mattress support that is not fixed on opposite sides to the unit frame (for example, a hinged support or a support created	NA
	by a recessed area in which the mattress support sits) is tested by gradually applying a 25-lbf (110-N) force in any direction to the mattress support to evaluate its attachment to the unit. The force is to be applied to the mattress support in each adjustment position. Test failure occurs if:	
6.15.2.1	Any fixed portion of the mattress support system becomes detached from the unit at any point of attachment.	NA
6.15.2.2	Any free-moving portion of the mattress support system that does not return to its intended use position once the force is removed. The force shall be removed after the force of 25 lbf (110 N) has been applied or the edge of the mattress support has been lifted at least 12 in. (300 mm).	NA
6.16	Crib Side Test Requirements:	
6.16.1	After completion of the cyclic and static portions of the side tests (see ASTM F406-10a section 8.9), the crib shall comply with the requirements of ASTM F406-10a section 5 and no spindles or slats shall have broken or completely separated from the top or bottom rail. Complete separation shall be determined by placing a right triangular prism shaped wedge (see Fig. A1.12) between two spindles or slats adjacent to the rail from which these have separated and applying a 20-lbf (90-N) pull force to the wedge in a direction normal to the plane of the crib side. If a spindle or slat moves away from the hole in the rail in which it was formerly secured, complete separation has occurred.	M
6.16.2	Components attached by screws shall not have separated by more than 0.04 in. (1 mm) upon completion of testing.	M
6.16.3	Any spindles or slats that could be rotated during the torque test shall comply with the spacing of crib components of ASTM F406-10a section 5 when turned to their most adverse position.	NA
6.17	Spindle/Slat Strength Testing—After testing in accordance with the procedure in ASTM F406-10a section 8.10 (with modification of 8.10.1 to 16 CFR 1220.2(b)(5)), there shall be no complete breakage of any spindle/slat or complete separation of either end of a spindle/slat from the crib assembly's horizontal members when tested per ASTM F406-10a section 8.10.2 and 8.10.3 except as explained in ASTM F406-10a section 8.10.4. Any failure, as defined in this paragraph, when testing per ASTM F406-10a section 8.10.4 and 8.10.5 shall constitute a failure of the test. Audible indications during testing shall not constitute evidence of failure. After testing, the spacing of spindles/slats shall comply with requirements of ASTM F406-10a section 6.3.	M



Technical Report: **(5111)089-0054**April 08, 2011
Page 12 of 40

Section in F406-10a	Requirement	Result
9.	Marking and Labeling	
9.1	Labeling	-
9.1.1	Each product and its retail package shall be marked or labeled clearly and legibly to indicate the following:	М
9.1.1.1	- The name of manufacturer, distributor, or seller, and either the place of business (city, state, and mailing address, including zip code) or telephone number, or both.	М
9.1.1.2	A code mark or other means that identifies the date (month and year as a minimum) of manufacture.	М
9.1.1.3	- The markings on product shall be permanent.	М
9.1.1.4	- Any upholstery label required by law shall not be used to meet the requirements of ASTM F406-10a section 9.1.1.	М
9.2	Warning StatementsEach product shall have warning statement:	-
9.2.1	The warnings shall be easy to read and understand. The warning statements shall be in contrasting color(s) and permanent.	М
9.2.2	The text shall be sans serif type. The safety alert symbol "Δ" and the word "WARNING" shall not be less than 0.2 in. (5 mm) high and the remainder of the text shall be in characters whose upper case shall be at least 0.1 in.(2.5 mm high) except as specified in ASTM F406-10a section 9.3.3	M
9.2.3	The warning statements in the following sections shall be addressed, unless exact wording is specifically required.	М
9.3	These Warnings Have specific Location Requirements:	-
9.3.1	Accessory warning – Non-full size crib/play yards with attachments shall include statements on the attachment addressing one of the following warnings.	NA
9.3.1.1	The warning is not required on non-full size crib/play yards with accessories that make the non-full size crib/play yard is unusable when the attachment is assembled according to the manufacturer's instructions. The non-full size crib/play yard is considered to be unusable if the attachment requires the non-full size crib/play yard floor be removed from the non-full size crib/play yard and used in whole in the attachment.	<u>-</u>



Technical Report: **(5111)089-0054**April 08, 2011
Page 13 of 40

Section in F406-10a	Requirement	Result
9.3.1.2	For accessories intended to be used with play yard/non-full size crib occupied:	-
	⚠ WARNING	NA
	Strangulation Hazard	
	Always attach {describe attachment} securely. If {describe attachment} is not secured, child in play yard/non-full size crib can lift or shift {describe attachment} and get neck trapped between {describe attachment} and non-full size crib\play yard frame.	
9.3.1.3	For attachment intended to be removed when play yard/non-full size crib is occupied:	-
	⚠ WARNING	NA
	Statement describing the hazard	
	Never leave {describe attachment} in place when child is in non-full size crib/play yard.	
9.3.1.4	Location - The warnings shall be on the accessory.	-
9.3.3	Suffocation Warning:	M
	⚠ WARNING	
	Infants can suffocate	
	 In gaps between a mattress too small or too thick and product sides 	
	On soft bedding	
	NEVER add a mattress, pillow, comforter, or padding.	
9.3.3.1	Location-This warning statement shall be along the top rail on opposite sides of the product.	М
9.3.3.2	The warning symbol and the word "WARNING" shall be bold face type not less than 0.2 in. (5 mm) high. The words "Infants can suffocate" shall be in characters whose upper case is not less than 0.16in. (4mm) high. The remainder of the warning statement shall be standard type style whose upper case shall be at least 0.1 in. (2.5 mm) high.	М
9.4	These warnings must be visible in their entirely when the product is in the manufacturer's recommended use position or must have a conspicuous warning giving their location, as follows:	М
	⚠ WARNING	
	See (insert statement indicating to the user where to find the warning) for warnings)	



Technical Report: **(5111)089-0054**April 08, 2011
Page 14 of 40

Section in F406-10a	Requirement	Result
9.4.1	The following warning shall be included exactly as stated below:	М
	Failure to follow these warnings and the instructions could result in serious injury or death	
9.4.2	Additional warning statements shall address the following (please note the plain type is descriptive information; bold type is used for the warning statements that shall be addressed).	М
9.4.2.1	The Product, including side rails, must be fully erected prior to use.	NA
9.4.2.2	For products with latches to prevent lowering a dropsied or prevent folding, add the following statement to that in ASTM F406-10a section 9.4.2.1	NA
	Make sure latches are secure	
9.4.2.3	For products with removable top rails:	NA
	Top support member must be installed prior to use.	
	Failure to install may result in child falling out of product.	
9.4.2.4	Strings can cause strangulation! Never place items with a string around a child's neck such as hood strings or pacifier cords. Never suspend strings over product or attach strings to toys.	М
9.4.2.5	Discontinue use of the product when child is able to climb out or reaches the height of 35 in. (890 mm).	М
9.4.2.6	Child can become entrapped and die when improvised netting or covers are placed on top of a product. Never add such items to confine child in product.	М
9.4.2.7	When child is able to pull to standing position, remove bumper pads, large toys, and other objects that could serve as steps for climbing out.	М
	For products with an adjustable height mattress support, replace this warning the following:	
	When child is able to pull to standing position, set mattress/base to lowest adjustment position and remove bumper pads, large toys, and other objects that could serve as steps for climbing out.	М
9.4.2.8	Never place product near a window where cords from blinds or drapes can strangle a child.	М
9.4.2.9	Products equipped with teething rails must include the following statement:	NA
	Replace teething rail if damaged, cracked, or loose	



Technical Report: **(5111)089-0054**April 08, 2011
Page 15 of 40

Section in F406-10a	Requirement	Result
9.4.2.10	For products that have a separate mattress/pad that is not permanently fixed in place;	M
	Use ONLY mattress/pad provided by manufacturer (which must be at least_in. long by_in. wide and not more than_in. thick)	
	1) For nonrectangular cribs:	
	Check proper fit of mattress. Should be not more than inches thick. The maximum gap between mattress and inside of crib border (or edge) should be no more than 1 inch.	M
	The blank is to be filled in with a dimension complying with ASTM F406-10a section 5.17.	
9.4.2.11	Always provide the supervision necessary for the continued safety of your child. When used for playing, never leave child unattended.	М
9.4.2.12	To reduce the risk of SIDS, pediatricians recommend healthy infants be placed on their back to sleep, unless otherwise advised by your physician.	М
9.4.2.13	Never use this product if there are any loose or missing fasteners, loose joints, broken parts, or torn mesh/fabric. Check before assembly and periodically during use. Contact (insert manufacturer name) for replacement parts. Never substitute parts.	М
10.	Instructional Literature	
10.1	Instructions provided with the unit	
	- shall be easy to read and understand	M
	- shall include assembly, maintenance, cleaning, operating, folding instructions, and warnings.	M
	 a means shall be provided to keep the instructions with the product. 	M
10.1.1	If a separate instruction sheet is used, the following note shall be at the top of the first page of the instructions:	-
	"Read all instructions BEFORE assembly and USE of product. KEEP INSTRUCTIONS FOR FUTURE USE."	М
	The statement "KEEP INSTRUCTIONS FOR FUTURE USE" shall be emphasized.	M
	 The statement "KEEP INSTRUCTIONS FOR FUTURE USE" is not required if the instructions are permanently affixed to the product. 	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 16 of 40

Section in F406-10a	Requirement	Result
10.1.1.1	Assembly Instructions—Unassembled non-full-size cribs shall be accompanied by detailed instructions that shall:	
	(1) Include an assembly drawing;	M
	(2) Include a list and description of all parts and tools required for assembly;	М
	(3) Include a full-size diagram of consumer assembled the required bolts and other fasteners.	M
10.1.2	Warning statements in the instructional literature	-
	Type size: "WARNING" - minimum 0.2 in. (5 mm) high	M
	Text: - minimum 0.1 in. (2.5 mm) high	M
10.2	The instructional literature shall contain the following warning statements from section 9 if applicable	-
	Attachment warning – Non-full size crib/play yards with attachments shall include statements on the attachment addressing one of the following warnings.	NA
	For attachments intended to be used with play yard/non-full size crib occupied:	-
		NA
	Strangulation Hazard	
	Always attach {describe attachment} securely. If {describe attachment} is not secured, child in play yard/non-full size crib can lift or shift {describe attachment} and get neck trapped between {describe attachment} and non-full size crib\play yard frame.	
	For attachment intended to be removed when play yard/non-full size crib is occupied:	-
	⚠ WARNING	NA
	Statement describing the hazard	
	Never leave {describe attachment} in place when child is in non-full size crib/play yard.	
	Drop side rails warning requirements:	-
	Mesh products that are designed with drop side rails must address the following warning:	NA
	WARNING—NEVER LEAVE INFANT IN PRODUCT	
	WITH SIDES DOWN.	
	Infant may roll into space between pad and loose	
	mesh side causing suffocation.	



Technical Report: **(5111)089-0054**April 08, 2011
Page 17 of 40

Section in F406-10a	Requirement	Result
	Suffocation Warning:	M
	⚠ WARNING	
	Infants can suffocate	
	In gaps between a mattress too small or too thick and product sides	
	On soft bedding	
	NEVER add a mattress, pillow, comforter, or padding.	
	The following warning shall be included exactly as stated below: **WARNING**	М
	Failure to follow these warnings and the instructions could result in serious injury or death	
	Additional warning statements shall address the following:	-
	The Product, including side rails, must be fully erected prior to use.	NA
	For products with latches to prevent lowering a dropsied or prevent folding, add the following statement:	NA
	Make sure latches are secure	
	For products with removable top rails:	NA
	Top support member must be installed prior to use.	
	Failure to install may result in child falling out of product.	
	Strings can cause strangulation! Never place items with a string around a child's neck such as hood strings or pacifier cords. Never suspend strings over product or attach strings to toys.	М
	Discontinue use of the product when child is able to climb out or reaches the height of 35 in. (890 mm).	M
	Child can become entrapped and die when improvised netting or covers are placed on top of a play yard. Never add such items to confine child in play yard.	М
	When child is able to pull to standing position, remove bumper pads, large toys, and other objects that could serve as steps for climbing out.	М
	For products with an adjustable height mattress support, replace this warning the following:	
	When child is able to pull to standing position, set mattress/base to lowest adjustment position and remove bumper pads, large toys, and other objects that could serve as steps for climbing out.	М
	Never place product near a window where cords from blinds or drapes can strangle a child.	M



Technical Report: **(5111)089-0054**April 08, 2011
Page 18 of 40

Section in F406-10a	Requirement	Result
	Products equipped with teething rails must include the following statement:	NA
	Replace teething rail if damaged, cracked, or loose	
	For products that have a separate mattress/pad that is not permanently fixed in place;	M
	Use ONLY mattress/pad provided by manufacturer (which must be at least in. long by in. wide and not more than in. thick)	
	1) For nonrectangular cribs:	M
	Check proper fit of mattress. Should be not more than inches thick. The maximum gap between mattress and inside of crib border (or edge) should be no more than 1 inch.	
	The blank is to be filled in with a dimension complying with 5.17.	
	Always provide the supervision necessary for the continued safety of your child. When used for playing, never leave child unattended.	М
	To reduce the risk of SIDS, pediatricians recommend healthy infants be placed on their back to sleep, unless otherwise advised by your physician.	М
	Never use this product if there are any loose or missing fasteners, loose joints, broken parts, or torn mesh/fabric. Check before assembly and periodically during use. Contact (insert manufacturer name) for replacement parts. Never substitute parts.	М
10.3	The warning statement shall address the following:	-
10.3.1	Never leave child in product with side lowered.	NA
	Be sure side is in raised and locked position whenever child is in product.	
10.3.2	Never use plastic shipping bags or other plastic film as mattress covers not sold and intended for that purpose. They can cause suffocation.	М
10.3.3	Water Mattress Use	-
	Products not intended to hold water mattresses must address the following:	М
	Never use a water mattress with this product.	
	Products designed to use a water mattress must specify the maximum thickness and weight of the water mattress.	NA
10.3.4	For products intended to be refinished as described in the instructions:	М
	If refinishing, use a nontoxic finish specified for children's products	



Technical Report: **(5111)089-0054**April 08, 2011
Page 19 of 40

Section	Requirement	Result
5	General Requirements	
5.1	All product corner post extensions	-
5.1.1	- shall not extend more than 0.06 in. (1.5 mm) above the upper edge of an end or side panel, whichever is higher, when measured from the lowest point on the upper edge of the end or side panel within 3 in. (76 mm) from the outermost contour of the post or elbow.	М
5.1.1.1	This requirement applies when any drop side/drop gate is in either the raised or lowered position.	NA
5.1.2	- The limitation in 5.1.1 do not apply to a corner post assembly that extends at least 16 in.(400mm) above the uppermost surface of the side rail in its highest position.	-
5.1.3	 Corner posts intended to accept removable vertical extensions made up of two or more segments (such as canopy post extensions) shall not permit the attachment of individual segments such that the resultant vertical extension would be in violation of the dimensional requirements of 5.1. 	NA
5.1.4	The dimensional requirement in 5.1 shall also apply to vertical members of circular cribs.	NA
5.2 (#)	Before testing	-
	- Shall not have Sharp Point defined in 16 CFR 1500.48	M
	- Shall not have Sharp Edge defined in 16 CFR 1500.49	M
	After testing	-
	- Shall not have Sharp Point defined in 16 CFR 1500.48	М
	- Shall not have Sharp Edge defined in 16 CFR 1500.49	М
5.3 (#)	Before testing	-
	- Shall not have Small Part defined in 16 CFR 1501	M
	After testing	-
	- Shall not have Small Part defined in 16 CFR 1501	M
5.4	The paint and surface coating on the product shall comply to 16 CFR	NT
	1303.	Per Client Request
5.5	There shall be no flammable solid as defined in 16CFR 1500.3 (c)(6)(vi) before or after testing in according with this specification.	М
5.6	Scissoring, Shearing, or Pinching	-



Technical Report: **(5111)089-0054**April 08, 2011
Page 20 of 40

Section	Requirement	Result
5.6.1	Any accessible point at the edges of the rigid parts throughout the range of motion	-
	- shall either be less than 0.210 in. (5.30 mm) or greater than 0.375 in. (9.50 mm) in diameter.	NA
5.6.2	Products with a drop top rail	-
5.6.2.1	All intersection of the "drop top rail" with the "top rail saddle", any position throughout the range of motion of the top rail	-
	- shall either be less than 0.210 in. (5.30 mm) or greater than 0.375 in. (9.50 mm) in diameter, OR	NA
	- greater than 0.210 in. (5.30 mm) and less than 0.375 in. (9.50 mm) but the depth of insertion less than 0.210 in. (5.30 mm)	NA
5.6.2.2	All intersection of the "hinge legs" and "saddle" with the "drop top rail" and the "inclined leg" where no padding of ¼ in. (6.30 mm) or less exist	-
	- shall allow a 0.375 in. (9.50 mm) diameter probe to pass between adjacent members in any and all positions when rotating the hinge legs about their respective pivots.	NA
5.6.2.3	The hinge legs	
	- shall allow a 0.375 in. (9.50 mm) diameter probe to pass between said hinge legs in any and all positions allowed when rotating the hinge legs about their respective pivots.	NA
5.6.2.4	All intersections of the drop side rail locking mechanism (hinge legs with the saddle)	-
	- shall either be less than 0.210 in. (5.30 mm) or greater than 0.375 in. (9.50 mm) in diameter, OR	NA
	- greater than 0.210 in. (5.30 mm) and less than 0.375 in. (9.50 mm) but the depth of insertion less than 0.210 in. (5.30 mm)	NA
5.7	Toy accessories attached to, removed from, or sold with a product, as well as their means of attachment, must meet applicable requirements of Specification F963.	NA
5.8	Latching and Locking Mechanisms	
5.8.1	All latches that are intended to be latched and unlatched during normal use while the child is in the product shall engage automatically when placed in the use position before and after testing	NA
	- Latches may be manually activated to allow placement into the use position but must engage automatically when released.	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 21 of 40

Section	Requirement	Result
5.8.2	Any unit that folds	-
	- shall have a latching or locking device or other provision in the design that will prevent the unit from unintentionally folding when properly placed in manufacturer' recommended position.	NA
5.8.2.1	During and upon completion of all testing, the unit shall remain in its manufacturer's recommended use position.	NA
5.8.3	Unit is designed with a latching or locking device	-
5.8.3.1	the latching or locking device shall remain engaged and operative after testing.	NA
5.8.3.2 (#)	- each single-action locking or latching device that is provided to prevent folding shall require a minimum force of 10 lbf (45 N) to activate the release mechanism. (Test method-section 8.8.2)	NA
5.8.3.3	each double-action locking or latching device shall require two distinct and separate actions for release.	NA
5.8.3.4	Product designs requiring latching or locking of a top rail(s) to prevent folding that includes central hinge(s) and rail assembly(ies) that moves downward when folded	-
	- shall be automatically engages when placed in a manufacturer's recommended use position.	NA
5.8.3.5	The top rail shall not give the appearance of being in the manufacturer's recommended use position before the locking device is fully engaged.	NA
	- If the product has a latching device that automatically engages and is intended to be set up by first erecting the side rails, and then depressing a center floor hub, the product shall be evaluated for false latch by testing in accordance with 8.27.	
5.9	Opening	



Technical Report: **(5111)089-0054**April 08, 2011
Page 22 of 40

Section	Requirement	Result
5.9.1	Holes or slots that extend entirely through a wall section of any rigid material less than 0.375-in. (9.53mm) thick and admit a 0.210-in (5.33mm) diameter rod	-
	- shall also admit a 0.375-in. (9.53mm) diameter rod.	NA
	Holes or slots that are between 0.21 in. (5.33mm) and 0.375 in. (9.53mm) and have a wall thickness less than 0.375-in. (9.53mm)	-
	- shall be permissible, provided the depth are limited to 0.375-in.(9.53mm) maximum by another rigid surface.	NA
	The product shall be evaluated in all manufacturer's recommended use position.	-
	Holes and openings in surfaces that are in contact with the floor or are below the mattress support and more than 3 in. (76mm) in from the perimeter of the frame or outer perimeter of the occupant space of a play yard or non full-size crib are exempt from this requirement because they are deemed not accessible to the occupant or child on the outsides of the product.	
5.9.2	Openings in the surface of the rigid mattress support material shall be designed to prevent entrapment of fingers, toes, hands and feet.	-
	Round openings	
	- shall comply with section 5.9.1, and	NA
	- shall not exceed 1.25 in. (32 mm) diameter.	NA
	Other shaped openings	-
	- shall comply with section 5.9.1, and	NA
	continuous portion of an opening that admits a 0.375 in. (9.50 mm) diameter rod must fit within a 1.25 in. (32 m) diameter circle.	NA
5.10(#)	Protective Components (Test method-Section 8.21)	
	Protective components that can be grasped by a child, or there is at least a 0.040 in (1.00 mm) gap between the component and its adjacent parent component shall not be removed during testing.	NA
5.11	Labeling	
5.11.1	Warning labels (whether paper or nonpaper) shall be permanent when test per 8.18 removed, must be permanent.	М
5.11.2	Warning statement applied directly onto the surface of the product by hot stamping, heat transfer, printing, wood burning, etc. shall be permanent when tested per 8.19.	NA
5.11.3	Nonpaper labels shall not liberate small parts when tested in accordance with 8.20.	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 23 of 40

Section	Requirement	Result
5.11.4	Storage pouch or other part with warning statement printed on it, excluding labels, shall be considered permanent if it cannot be removed when tested in accordance with 8.23.	NA
5.12(#)	Stability (Test Method – Section 8.17)	
	A minimum of three perimeter support points of the product not in a straight line shall remain in contact with the inclined plane.	М
	 Product with an adjustable mattress support shall be tested with the mattress in the lowest adjustment position and shall meet the above requirement. 	М
5.13	Cord / Strap Length (Test method – section 8.24)	
	 Cord or strap made of flexible material attached to the product shall not have a free, stretched length in excess of 7.4 in. (188 mm). 	NA
5.14	Coil Springs	
	Exposed coil spring, which is accessible to the occupant, having a space between coils of 0.210 in.(5.50 mm) or greater during static load test specified in 8.6, 8.11, 8.12 and 8.13 shall be covered or otherwise designed to prevent injury from entrapment.	NA
5.15	Entrapment in Accessories	
5.15.1	When tested in accordance with the procedure in 8.26.2 openings shall not permit the passage of the entire small head probe shown in Fig. A1.6, unless they allow the free passage of the entire large head probe shown in Fig. A1.7.	NA
5.15.2	When tested in accordance with the procedure in 8.26.3, all attachment points shall remain attached and any opening exposed by the test shall not permit the entire passage of the small head probe shown in Fig. A1.6.	NA
5.15.4	With the accessory installed on the play yard / non-full size crib per the instructions, cords and straps on the accessory, whether fastened or unfastened, must not capable of forming a loop in conjunction with the product that allows complete passage of the small head probe. Restraints straps shall be evaluated in all possible configurations, other than the manufacturer's intended use position fastened on top of the product surface. In addition, restraint straps are to be evaluated as follows:	NA
5.15.4.1	Evaluation on Underside of Accessory—If any restraint component can be pushed or pulled with a force less than 25 lb through any opening that extends completely through the accessory, the restraint component shall be pushed or pulled through the accessory and evaluated in the fastened and unfastened condition below the lowest surface on the underside of the accessory. Any loop(s) formed shall not allow complete passage of the small head probe.	



Technical Report: **(5111)089-0054**April 08, 2011
Page 24 of 40

Section	Requirement	Result
5.15.4.2	When fastened per the manufacturer's instructions, extended to their greatest length and draped over the side of the accessory, restraint straps shall not allow complete passage of the small head probe below the lowest surface on the underside of the accessory.	
5.16	Mattress	
5.16.1	Each product shall be sold with the mattress pad included.	M
5.16.2	For the mattress of mesh/fabric products	-
	- the filling material of the mattress such as foam, fiberfill, etc. shall not exceed 1 in. (25 mm) thickness.	NA
	the total thickness of the mattress including all fabric or vinyl layers, filling material and any structural members such as wood, hardboard, etc. shall not exceed 1 ½ in. (37 mm)	NA
5.17	Mattresses for Rigid Sided Products	
5.17.1	Mattress Thickness	М
5.17.1.1	A mattress supplied with a non-full-size crib shall, in a noncompressed state, have a thickness that will provide a minimum effective crib-side height dimension of at least 20 in. (50.8 cm) as measured from the upper surface of the crib side or end panel, or both. For this measurement, the crib side shall be in its highest adjustable position and the mattress support in its lowest adjustable position.	М
5.17.1.2	A mattress supplied with a non-full-size crib shall, in a noncompressed state, have a thickness that will provide a minimum effective crib-side height dimension of at least 3 in. (7.6 cm) as measured from the upper surface of the mattress to the upper surface of the crib side or end panel, or both. For this measurement, the crib side shall be in its lowest adjustable position and the mattress support in its highest adjustable position.	М
5.17.2	Mattress Dimensions—The dimensions of a mattress supplied with a non-full-size baby crib shall be such that the mattress, when inserted in the center of the crib, in a noncompressed state at any of the adjustable positions of the mattress support, shall not leave a gap of more than 1/2 in. (1.3 cm) at any point between the perimeter of the mattress and the perimeter of the crib. When the mattress is placed against the perimeter of the crib the resulting gap shall not exceed 1 in. (2.6 cm).	М
5.18	Protrusions (Test method – section 8.25)	
	No string on the weight gage shall state attached to a protrusion.	NA
5.19	Crib designs shall allow assembly of key structural elements only in the manufacturer's recommended use position or have permanent markings that indicate their correct orientation. The markings must be conspicuous in any misassembled state.	М



Technical Report: **(5111)089-0054**April 08, 2011
Page 25 of 40

Section	Requirement	Result
6	Performance Requirements for Rigid-Sided Units	
6.1	Before and after all testing, the product shall comply with the requirements of Section 5.	М
6.2	Crib-Side Height	
6.2.1	For moveable sides, with the mattress support in its highest adjustable position and the crib side in its lowest adjustable position, the vertical distance from the upper surface of the mattress support to the upper surface of the crib side or end panel, or both, shall not be less than 5 in. (12.7 cm).	NA
6.2.2	For stationary sides, with the mattress support in its highest adjustable position, the vertical distance from the upper surface of the uncompressed mattress to the upper surface of the crib side or end panel, or both, shall not be less than 9 in. (22.8 cm).	М
6.2.3	With the mattress support in its lowest adjustable position and the crib side in its highest adjustable position, the vertical distance from the upper surface of the mattress support to the upper surface of the crib side or end panel, or both, shall not be less than 22 in. (55.8 cm).	М
6.2.4	Crib Side Configurations—Cribs with side(s) having moveable components intended to aid in access to the occupant shall have those sides rigidly attached to the crib ends and contain no movable section less than 14 in. (35.6 cm) from the top of the noncompressed mattress with the mattress support in its lowest adjustable position.	NA
6.3	Spacing of Unit Components	
6.3.1	Uniformly Spaced Components—The distance between	М
	adjacent, uniformly spaced components (such as slats,	
	spindles, or corner posts, or a combination thereof) shall not be greater than 2 3/8 in. (6 cm). The distance between any such adjacent components shall not exceed 2 1/2 in. (6.3 cm) at any point when subjected to the test procedure specified in 8.2.	
6.3.2	Nonuniformly Spaced Components:	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 26 of 40

Section	Requirement	Result
6.3.2.1	The distance between adjacent nonuniformly spaced	NA
	components (such as slats, spindles, or corner posts, or a combination thereof) shall preclude passage of block A, specified in 8.1, when inserted in any orientation (nonuniformly spaced components referes to irregularly shaped crib slats whether parallel to each other or not).	
6.3.2.2	The spacing between any such adjacent components	NA
	shall preclude passage of block B, specified in 8.1, when	
	inserted in any orientation immediately above and below the loading wedge specified in 8.1 while the components are being subjected to the test procedure specified in 8.2.	
6.4	Hardware	
6.4.1	The hardware in a non-full-size baby crib shall be designed and constructed to eliminate pinching, bruising,	М
	lacerating, crushing, amputating, or other potentials for injury, or a combination thereof, when the crib is in normal use or when subjected to reasonably foreseeable damage or abuse.	
6.4.2	Non-full-size baby cribs shall incorporate locking or latching devices for dropgates or other moveable sides. These devices shall require either a minimum force of 10 lb (4.5 kg) for activation or at least two distinct actions to release them.	NA
6.5	Fasteners	
6.5.1	Wood Screws:	
6.5.1.1	Wood screws shall not be used in the assembly of key structural elements that must be removed by the consumer in the normal disassembly of a crib.	М
6.5.1.2	No crib shall require consumer assembly of key structural elements using wood screw fasteners. This shall not apply to drawers or other storage components or accessory items.	М
6.5.2	Factory assembly using wood screws on key structural elements is allowed if the wood screws are a second method of attachment or the wood screws include a lock washer, glue, or other means to impede loosening or detachment.	NA
6.5.3	Metal inserts with external wood screw threads for screwing into a wood component and providing internal machine threads to accommodate a machine screw shall be glued or include other means to impede loosening or detaching.	М
6.5.4	Wood screws are permitted be used as the primary fasteners or only fasteners for non-key structural elements.	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 27 of 40

Section	Requirement	Result
6.5.5	Metal to metal threaded fasteners, such as sheet metal screws and machine screws, secured into metal components and used to attach key structural elements shall have lock washers, self-locking nuts or other means to impede loosening as defined in 6.16.2 or detachment during the testing required by this standard.	М
6.6	Construction and Finishing:	
6.6.1	All wood surfaces of non-full-size baby cribs shall be smooth and free from splinters.	M
6.6.2	All wood parts of non-full-size baby cribs shall be free from splits, cracks, or other defects that might lead to structural failure.	M
6.6.3	Ends and sides of non-full-size baby cribs shall have no horizontal bar, ledge, projections, or other surface accessible to the child inside the crib that could be used as a toehold (any ledge or projection with a depth dimension greater than 3/8 in. (1 cm) located less than 16 in. (40.6 cm) above the mattress support in its lowest adjustable position when the crib side is in its highest adjustable position.	М
6.7	Requirements for Cutouts—Non-full-size baby cribs shall comply with the test requirements of 8.3.	NA
6.11	Plastic Teething Rail:	
6.11.1	This test consists of deforming the plastic teething rail under load to determine the security of the attachment.	NA
6.11.2	Failure occurs when the feeler gage as defined in 8.4.1.1 can freely enter into a gap created by the deflection or deformation of the plastic teething rail, or both, when tested in accordance with 8.4.	NA
6.12	Cyclic Testing—No crib shall exhibit structural failure, loosening of fasteners as defined in 6.12.1, damage to latching or locking mechanisms, or failure of latching or locking mechanisms when tested in accordance with the test methods in 8.5.	М
6.12.1	After testing in accordance with the procedure in 8.5, key structural elements attached by screws or threaded fasteners shall not have separated by more than 0.04 in. (1.00 mm) upon completion of testing.	М
6.13	Side(s) or End(s) Latch Testing, or Both	
6.13.1	Dropgate or Other Moveable Side Latch Testing:	
6.13.1.1	This test consists of loading the end while a prescribed force is applied to the dropgate or other moveable side(s) (see 8.6.3 or 8.6.4, whichever is appropriate).	NA
6.13.1.2	The latching mechanism shall not disengage during testing and shall continue to function in the intended manner upon completion of the testing.	NA
6.13.2	Foldable Side or End Latch Testing:	



Technical Report: **(5111)089-0054**April 08, 2011
Page 28 of 40

Section	Requirement	Result
6.13.2.1	This test consists of loading the latches intended to prevent folding of the side when in the manufacturer's recommended use position (see 8.6.5).	NA
6.13.2.2	The latching mechanism shall not disengage during testing and shall continue to function in the intended manner upon completion of the testing.	NA
6.14	Mattress Support System Vertical Impact Test Requirements	
	After testing in accordance with the procedure in 8.7, the non-full size crib shall comply with the requirements of Section 5.	M
	Key structural elements attached by screws shall not have separated by more than 0.04 in. (1.00 mm) upon completion of testing.	
6.15	Mattress Support System Testing	
6.15.1	A mattress support that is fixed with respect to the unit frame, is tested in accordance with 8.8. Test failure occurs if the mattress support system becomes detached from the frame at any point of attachment, or if the force cannot be maintained.	М
6.15.2	A mattress support that is not fixed on opposite sides to the unit frame (for example, a hinged support or a support created by a recessed area in which the mattress support sits) is tested by gradually applying a 25-lbf (110-N) force in any direction to the mattress support to evaluate its attachment to the unit. The force is to be applied to the mattress support in each adjustment position. Test failure occurs if:	NA
6.15.2.1	Any fixed portion of the mattress support system becomes detached from the unit at any point of attachment.	NA
6.15.2.2	Any free-moving portion of the mattress support system that does not return to its intended use position once the force is removed. The force shall be removed after the force of 25 lbf (110 N) has been applied or the edge of the mattress support has been lifted at least 12 in. (300 mm).	NA
6.16	Crib Side Test Requirements:	
6.16.1	After completion of the cyclic and static portions of the side tests (see 8.9), the crib shall comply with the requirements of Section 5 and no spindles or slats shall have broken or completely separated from the top or bottom rail. Complete separation shall be determined by placing a right triangular prism shaped wedge (see Fig. A1.12) between two spindles or slats adjacent to the rail from which these have separated and applying a 20-lbf (90-N) pull force to the wedge in a direction normal to the plane of the crib side. If a spindle or slat moves away from the hole in the rail in which it was formerly secured, complete separation has occurred.	M
6.16.2	Components attached by screws shall not have separated by more than 0.04 in. (1 mm) upon completion of testing.	М



Technical Report: **(5111)089-0054**April 08, 2011
Page 29 of 40

Section	Requirement	Result
6.16.3	Any spindles or slats that could be rotated during the torque test shall comply with the spacing of crib components of Section 5 when turned to their most adverse position.	NA
6.17	Spindle/Slat Strength Testing—After testing in accordance with the procedure in 8.10, there shall be no complete breakage of any spindle/slat or complete separation of either end of a spindle/slat from the crib assembly's horizontal members when tested per 8.10.2 and 8.10.3 except as explained in 8.10.4. Any failure, as defined in this paragraph, when testing per 8.10.4 and 8.10.5 shall constitute a failure of the test. Audible indications during testing shall not constitute evidence of failure. After testing, the spacing of spindles/slats shall comply with requirements of 6.3.	М
7.	Performance Requirements for Mesh/Fabric Units	
7.1 (#)	Height of Sides	
	With mattress support in its lowest position, the height of sides of a unit	-
	- shall be a minimum of 20 in. (508 mm) when measured vertically from the top of the noncompressed mattress support to the top of the side rail.	NA
7.2	Side Deflection and Strength	
7.2.1(#)	Top rail and supporting members (Test method - section 8.11.2.2)	-
	 shall not have fracture, disengage, fold, or have a permanent deflection that reduces the height to less than that specified in section 7.1. 	NA
7.2.2(#)	Side of the unit (Test method - section 8.11.2.3)	-
	- shall not deflect under a force to the height less than 18 in. (460 mm) when measured vertically at the location where the force is applied.	NA
7.2.3(#)	The top rail and locking mechanism of units having a top rail assembly with a central hinge (Test method - section 8.11.2.4)	-
	- shall not break or disengage during testing.	NA
7.3 (#)	Floor Strength (Test method – section 8.12)	
	the floor of the unit shall withstand the applied static load and dynamic load.	NA
	- after completion of the test, the product shall comply with all requirements in section 5.	NA
	- no failure shall occur in the frame, sides, ends or floor.	NA
7.4	Top Rail Covering Materials (Test method - section 8.22)	
	When unsupported or nonreinforced vinyl are used to cover any top rail or component, the thickness of the vinyl shall not be less than 0.011 in. (0.28 mm).	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 30 of 40

Section	Requirement	Result
7.5	Mesh Requirements	
7.5.1(#)	Mesh Opening (Test method - section 8.14)	-
	- A mesh opening shall not admit a 0.25 in. diameter rod with full radius tip during testing.	NA
7.5.2(#)	Mesh Strength (Test method - section 8.15)	-
	- shall not break, rupture, or	NA
	- become separated from its supporting structure or attachments during testing.	NA
7.6	Fabric Material Requirements	
7.6.1	Fabric Strength	-
	Fabric material used for sides, ends, or floor support excluding mesh	
7.6.1.1	- shall have a breaking strength of at least 50 lbf (220 N) in both the warp and fill directions. (Test method – D 5034, grab test)	NA
7.6.1.2	- shall have a tear resistance of at least 2 lbf (9 N) in both the warp and fill directions. (Test method – D 1424)	NA
7.7	Mesh/Fabric Assembly Requirements	
7.7.1	Sewn assembly	-
	All stitching that is accessible to the occupant shall be lock- stitching, or	NA
	A chain-stitch where the key thread is not accessible to the occupant	NA
7.7.2	Seam strength	
	- All seams shall have a breaking strength of not less than 30 lbf (130 N). (Test method – D 1683)	NA
7.7.3(#)	Mesh/fabric attachment strength (Test method – section 8.16)	-
	 All locations where mesh/fabric is fastened mechanically to rigid structural elements, shall not disengage or deform under a load, such that the fabric can be disassembled. 	NA
9.	Marking and Labeling	
9.1	Labeling	
9.1.1	Each product and its retail package shall be marked or labeled clearly and legibly to indicate the following:	М
9.1.1.1	- The name of manufacturer, distributor, or seller, and either the place of business (city, state, and mailing address, including zip code) or telephone number, or both.	М
9.1.1.2	- A code mark or other means that identifies the date (month and year as a minimum) of manufacture.	M



Technical Report: **(5111)089-0054**April 08, 2011
Page 31 of 40

Section	Requirement	Result
9.1.1.3	- The markings on product shall be permanent.	M
9.1.1.4	- Any upholstery label required by law shall not be used to meet the requirements of 9.1.1.	М
9.2	Warning StatementsEach product shall have warning statement:	-
9.2.1	The warnings shall be easy to read and understand. The warning statements shall be in contrasting color(s) and permanent.	М
9.2.2	The text shall be sans serif type. The safety alert symbol "△—" and the word "WARNING" shall not be less than 0.2 in. (5 mm) high and the remainder of the text shall be in characters whose upper case shall be at least 0.1 in.(2.5 mm high) except as specified in 9.3.2 and 9.3.3	М
9.2.3	The warning statements in the following sections shall be addressed, unless exact wording is specifically required.	M
9.3	These Warnings Have specific Location Requirements:	
9.3.1	Accessory warning – Non-full size crib/play yards with attachments shall include statements on the attachment addressing one of the following warnings.	NA
9.3.1.1	The warning is not required on non-full size crib/play yards with accessories that make the non-full size crib/play yard is unusable when the attachment is assembled according to the manufacturer's instructions. The non-full size crib/play yard is considered to be unusable if the attachment requires the non-full size crib/play yard floor be removed from the non-full size crib/play yard and used in whole in the attachment.	-
9.3.1.2	For accessories intended to be used with play yard/non-full size crib occupied:	-
	⚠ WARNING	NA
	Strangulation Hazard	
	Always attach {describe attachment} securely. If {describe attachment} is not secured, child in play yard/non-full size crib can lift or shift {describe attachment} and get neck trapped between {describe attachment} and non-full size crib\play yard frame.	
9.3.1.3	For accessories intended to be removed when play yard/non-full size crib is occupied:	-
	⚠ WARNING	NA
	Statement describing the hazard	 .
	Never leave {describe attachment} in place when child is in non-full size crib/play yard.	
9.3.1.4	Location – The warnings shall be on the attachment.	-



Technical Report: **(5111)089-0054**April 08, 2011
Page 32 of 40

Section	Requirement	Result
9.3.2	Mesh drop side rails warning requirements:	-
9.3.2.1	Mesh products that are designed with drop side rails must address the following warning:	NA
	WARNING—NEVER LEAVE INFANT IN PRODUCT	
	WITH SIDES DOWN.	
	Infant may roll into space between pad and loose	
	mesh side causing suffocation.	
9.3.2.2	Location-Warning label shall be on either the inside of the top rail on opposite sides of the product or on two opposite saddle covers.	NA
9.3.2.3	The words "warning", "never leave," and "sides down" shall be in boldface type and shall measure no less than 0.2 in. (5 mm) high.	NA
9.3.2.4	All other words shall be standard type style and shall measure no less than 0.16 in. (4 mm) high.	NA
9.3.3	Suffocation Warning:	М
	⚠ WARNING	
	Infants can suffocate	
	In gaps between a mattress too small or too thick and product sides	
	On soft bedding	
	NEVER add a mattress, pillow, comforter, or padding.	
9.3.3.1	Location-This warning statement shall be along the top rail on opposite sides of the product.	M
9.3.3.2	The warning symbol and the word "WARNING" shall be bold face type not less than 0.2 in. (5 mm) high. The words "Infants can suffocate" shall be in characters whose upper case is not less than 0.16in. (4mm) high. The remainder of the warning statement shall be standard type style whose upper case shall be at least 0.1 in. (2.5 mm) high.	М
9.4	These warnings must be visible in their entirely when the product is in the manufacturer's recommended use position or must have a conspicuous warning giving their location, as follows:	М
	⚠ WARNING	
	See (insert statement indicating to the user where to find the warning) for warnings)	
9.4.1	The following warning shall be included exactly as stated below:	М
	⚠ Warning	
	Failure to follow these warnings and the instructions could result in serious injury or death	



Technical Report: **(5111)089-0054**April 08, 2011
Page 33 of 40

Section	Requirement	Result
9.4.2	Additional warning statements shall address the following (please note the plain type is descriptive information; bold type is used for the warning statements that shall be addressed).	М
9.4.2.1	The Product, including side rails, must be fully erected prior to use.	NA
9.4.2.2	For products with latches to prevent lowering a dropsied or prevent folding, add the following statement to that in 9.4.2.1	NA
	Make sure latches are secure	
9.4.2.3	For products with removable top rails:	NA
	Top support member must be installed prior to use.	
	Failure to install may result in child falling out of product.	
9.4.2.4	Strings can cause strangulation! Never place items with a string around a child's neck such as hood strings or pacifier cords. Never suspend strings over product or attach strings to toys.	M
9.4.2.5	Discontinue use of the product when child is able to climb out or reaches the height of 35 in. (890 mm).	М
9.4.2.6	Child can become entrapped and die when improvised netting or covers are placed on top of a product. Never add such items to confine child in product.	М
9.4.2.7	When child is able to pull to standing position, remove bumper pads, large toys, and other objects that could serve as steps for climbing out.	М
	For products with an adjustable height mattress support, replace this warning the following:	
	When child is able to pull to standing position, set mattress/base to lowest adjustment position and remove bumper pads, large toys, and other objects that could serve as steps for climbing out.	M
9.4.2.8	Never place product near a window where cords from blinds or drapes can strangle a child.	М
9.4.2.9	Products equipped with teething rails must include the following statement:	NA
	Replace teething rail if damaged, cracked, or loose	



Technical Report: **(5111)089-0054**April 08, 2011
Page 34 of 40

Section	Requirement	Result
9.4.2.10	For products that have a separate mattress/pad that is not permanently fixed in place;	М
	Use ONLY mattress/pad provided by manufacturer (which must be at least_in. long by_in. wide and not more than_in. thick)	
	1) For nonrectangular cribs:	NA
	Check proper fit of mattress. Should be not more than inches thick. The maximum gap between mattress and inside of crib border (or edge) should be no more than 1 inch.	NA
	The blank is to be filled in with a dimension complying with 5.17.	
9.4.2.11	Always provide the supervision necessary for the continued safety of your child. When used for playing, never leave child unattended.	М
9.4.2.12	To reduce the risk of SIDS, pediatricians recommend healthy infants be placed on their back to sleep, unless otherwise advised by your physician.	М
9.4.2.13	Never use this product if there are any loose or missing fasteners, loose joints, broken parts, or torn mesh/fabric. Check before assembly and periodically during use. Contact (insert manufacturer name) for replacement parts. Never substitute parts.	М
10.	Instructional Literature	
10.1	Instructions provided with the unit	
	- shall be easy to read and understand	M
	- shall include assembly, maintenance, cleaning, operating, folding instructions, and warnings.	М
	- a means shall be provided to keep the instructions with the product.	М
10.1.1	If a separate instruction sheet is used, the following note shall be at the top of the first page of the instructions:	-
	- "Read all instructions BEFORE assembly and USE of product. KEEP INSTRUCTIONS FOR FUTURE USE."	М
	- The statement "KEEP INSTRUCTIONS FOR FUTURE USE" shall be emphasized.	М
	- The statement "KEEP INSTRUCTIONS FOR FUTURE USE" is not required if the instructions are permanently affixed to the product.	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 35 of 40

Section	Requirement	Result
10.1.1.1	Assembly Instructions—Unassembled non-full-size cribs shall be accompanied by detailed instructions that shall:	
	(1) Include an assembly drawing;	M
	(2) Include a list and description of all parts and tools required for assembly;	M
	(3) Include a full-size diagram of consumer assembled the required bolts and other fasteners.	M
10.1.2	Warning statements in the instructional literature	-
	Type size: "WARNING" - minimum 0.2 in. (5 mm) high	M
	Text: - minimum 0.1 in. (2.5 mm) high	M
10.2	The instructional literature shall contain the following warning statements from section 9 if applicable	-
	Accessory warning – Non-full size crib/play yards with attachments shall include statements on the attachment addressing one of the following warnings.	NA
	For accessories intended to be used with play yard/non-full size crib occupied:	-
	⚠ WARNING	NA
	Strangulation Hazard	
	Always attach {describe attachment} securely. If {describe attachment} is not secured, child in play yard/non-full size crib can lift or shift {describe attachment} and get neck trapped between {describe attachment} and non-full size crib\play yard frame.	
	For accessories intended to be removed when play yard/non-full size crib is occupied:	-
	⚠ WARNING	NA
	Statement describing the hazard	
	Never leave {describe attachment} in place when child is in non- full size crib/play yard.	
	Drop side rails warning requirements:	-
	Mesh products that are designed with drop side rails must address the following warning:	NA
	WARNING—NEVER LEAVE INFANT IN PRODUCT	
	WITH SIDES DOWN.	
	Infant may roll into space between pad and loose	
	mesh side causing suffocation.	



Technical Report: **(5111)089-0054**April 08, 2011
Page 36 of 40

Section	Requirement	Result
	Suffocation Warning:	М
	⚠ WARNING	
	Infants can suffocate	
	 In gaps between a mattress too small or too thick and product sides 	
	On soft bedding	
	NEVER add a mattress, pillow, comforter, or padding.	
	The following warning shall be included exactly as stated below:	М
	⚠ WARNING	
	Failure to follow these warnings and the instructions could result in serious injury or death	
	Additional warning statements shall address the following:	-
	The Product, including side rails, must be fully erected prior to use.	NA
	For products with latches to prevent lowering a dropsied or prevent folding, add the following statement:	NA
	Make sure latches are secure	
	For products with removable top rails:	NA
	Top support member must be installed prior to use.	
	Failure to install may result in child falling out of product.	
	Strings can cause strangulation! Never place items with a string around a child's neck such as hood strings or pacifier cords. Never suspend strings over product or attach strings to toys.	М
	Discontinue use of the product when child is able to climb out or reaches the height of 35 in. (890 mm).	М
	Child can become entrapped and die when improvised netting or covers are placed on top of a play yard. Never add such items to confine child in play yard.	М
	When child is able to pull to standing position, remove bumper pads, large toys, and other objects that could serve as steps for climbing out.	М
	For products with an adjustable height mattress support, replace this warning the following:	
	When child is able to pull to standing position, set mattress/base to lowest adjustment position and remove bumper pads, large toys, and other objects that could serve as steps for climbing out.	M



Technical Report: **(5111)089-0054**April 08, 2011
Page 37 of 40

Section	Requirement	Result
	Never place product near a window where cords from blinds or drapes can strangle a child.	М
	Products equipped with teething rails must include the following statement:	NA
	Replace teething rail if damaged, cracked, or loose	
	For products that have a separate mattress/pad that is not permanently fixed in place;	М
	Use ONLY mattress/pad provided by manufacturer (which must be at least in. long by in. wide and not more than in. thick)	
	1) For nonrectangular cribs:	NA
	Check proper fit of mattress. Should be not more than inches thick. The maximum gap between mattress and inside of crib border (or edge) should be no more than 1 inch.	
	The blank is to be filled in with a dimension complying with 5.17.	
	Always provide the supervision necessary for the continued safety of your child. When used for playing, never leave child unattended.	M
	To reduce the risk of SIDS, pediatricians recommend healthy infants be placed on their back to sleep, unless otherwise advised by your physician.	M
	Never use this product if there are any loose or missing fasteners, loose joints, broken parts, or torn mesh/fabric. Check before assembly and periodically during use. Contact (insert manufacturer name) for replacement parts. Never substitute parts.	М
10.3	The warning statement shall address the following:	-
10.3.1	Never leave child in product with side lowered.	NA
	Be sure side is in raised and locked position whenever child is in product.	
10.3.2	Never use plastic shipping bags or other plastic film as mattress covers not sold and intended for that purpose. They can cause suffocation.	М
10.3.3	Water Mattress Use	-
	Products not intended to hold water mattresses must address the following:	М
	Never use a water mattress with this product.	
	Products designed to use a water mattress must specify the maximum thickness and weight of the water mattress.	NA



Technical Report: **(5111)089-0054**April 08, 2011
Page 38 of 40

1.10.111.100.1001		
Section	Requirement	Result
10.3.4	For products intended to be refinished as described in the instructions:	М
	If refinishing, use a nontoxic finish specified for children's products	



Technical Report: **(5111)089-0054**April 08, 2011
Page 39 of 40

EXHIBIT # 1



SAMPLE PRODUCT



Technical Report: **(5111)089-0054**April 08, 2011
Page 40 of 40

EXHIBIT #2



ORIGINAL SAMPLE PRODUCT